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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/064,549

07/25/2002

Harry Israel Ringermacher

RD-28294

1282

6147

7590

10/27/2005

GENERAL ELECTRIC COMPANY
GLOBAL RESEARCH
PATENT DOCKET RM. BLDG. K1-4A59
NISKAYUNA, NY 12309

EXAMINER

KALIVODA, CHRISTOPHER M

ART UNIT

PAPER NUMBER

2883

DATE MAILED: 10/27/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/064,549

Applicant(s)

RINGERMACHER ET AL.

Examiner

Christopher M. Kalivoda

Art Unit

2883

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on After-Final Amendment on 10/12/2005.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 3, 4, 8-10, 12-15, 18-23, 39 and 41 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 3, 4, 8-10, 13-15 and 18-23 is/are allowed.
- 6) ☒ Claim(s) 1, 12, 39 and 41 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on July 25, 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Response to Arguments

The indicated allowability of claims 1, 12, 39 and 41 is withdrawn in view of the newly discovered reference(s) to Honda et al., U.S. Patent 6,806,473. Rejections based on the newly cited reference(s) follow.

In addition, the finality of the previous office action is withdrawn since a new rejection is being made. However, since the claims have been amended, this action will be made final.

A call was placed to Ms. Penny Clarke to discuss the new reference on 10/24/05. Ms. Clark indicated she would prefer to receive an office action and that she would pursue an Affidavit to swear behind the reference.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1 and 12 are rejected under 35 U.S.C. 102(e) as being anticipated by Honda et al., U.S. Patent 6,806,473.

Regarding independent claim 1 as claimed, Honda et al., teach an imager for imaging a subject (Fig 1, ref sign 15) illuminated by incident radiation (Fig 4 -see arrow), said imager comprising: a substrate comprising polymer (col 12, lines 17-24 and Fig 4, ref sign 214), a photosensor array (Fig 2 or 3), disposed on said substrate wherein said photosensor array comprises a plurality of photosensors and an addressable (Fig 3, ref sign 25 is the scanning circuit) thin film transistor (TFT) array comprising a plurality of TFTs (Fig 3, ref sign 222), wherein each of said TFTs is electrically coupled to a respective one of said photosensors so as to selectively address respective photosensors in said photosensor array, and wherein each of said TFTs comprises a gate electrode (Fig 11, see gate electrode), a semiconductive region (Fig 11, top layer) comprising an organic semiconductor (col 11, lines 10-13 and Fig 11) and disposed over said gate electrode (Fig 11-layer is over gate as well as source and drain), and a source electrode (Fig 11, see source electrode) and a drain electrode (Fig 11, see drain electrode) in contact with said semiconductive region; and a scintillator (Fig 4, ref sign 211), disposed so as to receive and absorb the incident radiation configured to convert the incident radiation to optical photons (col 6, lines 4-8), and optically coupled to said photosensor array, wherein said photosensor array is configured to receive the optical photons and to generate an electrical signal corresponding to the optical photons (col 8, lines 45-48).

Regarding claim 12, the semiconductive region is disposed over the source and drain electrodes as described above and the photosensors are disposed between the substrate and addressable TFT array wherein the TFTs are optically transparent (since

the TFTs have the same structure). There is also a cover layer over the scintillator (Fig 2, ref sign 21).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 39 and 41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dobbs et al., U.S. Patent 5,757,878 in view of Honda et al. U.S. Patent 6,806,473.

Regarding independent claim 39 as claimed, Dobbs et al., teach a linear array (col 5, lines 9-12) computer tomography (CT) scanner (col 1, lines 5-7). Furthermore, Dobbs et al. teach each of said photosensors is oriented at a predetermined angle relative to an adjacent one of said photosensors, for alignment with the incident radiation, and wherein said substrate and said linear photosensor array are arranged in a fixed configuration (Fig 4 or 6, ref sign 92).

However, the reference is silent with respect to a substrate comprising polymer, a linear photosensor array disposed on said substrate said photosensor array comprising a plurality of photosensors arranged in a row and an addressable thin film transistor (TFT) array comprising a plurality of TFTs, each of said TFTs being electrically coupled to a respective one of said photosensors so as to selectively address respective photosensors in said linear photosensor array wherein each of said

TFTs comprises a gate electrode, a semiconductive region comprising an organic semiconductor and disposed over said gate electrode, and a source electrode and a drain electrode in contact with said semiconductive region; a scintillator disposed so as to receive and absorb the incident radiation, configured to convert the incident radiation to optical photons, and optically coupled to said linear photosensor array, wherein said linear photosensor array is configured to receive the optical photons and to generate an electrical signal corresponding to the optical photons and wherein each of said photosensors is oriented at a predetermined angle relative to an adjacent one of said photosensors, for alignment with the incident radiation, and wherein said substrate and said linear photosensor array are arranged in a fixed configuration.

Honda et al. teach a substrate comprising polymer (col 12, lines 17-24 and Fig 4, ref sign 214), a photosensor array (Fig 2 or 3) disposed on said substrate said photosensor array comprising a plurality of photosensors arranged in a row and an addressable thin film transistor (TFT) array (Fig 3, ref sign 25 is the scanning circuit) comprising a plurality of TFTs (Fig 3, ref sign 222), each of said TFTs being electrically coupled to a respective one of said photosensors so as to selectively address respective photosensors in said linear photosensor array wherein each of said TFTs comprises a gate electrode (Fig 11 – see gate electrode), a semiconductive region (Fig 11-top layer), comprising an organic semiconductor (col 11, lines 10-13 and Fig 11) and disposed over said gate electrode (Fig 11-layer is over gate as well as source and drain), and a source electrode (Fig 11-source electrode) and a drain electrode (Fig 11, drain electrode) in contact with said semiconductive region; a scintillator (Fig 4, ref sign

211) disposed so as to receive and absorb the incident radiation, configured to convert the incident radiation to optical photons (col 6, lines 4-8), and optically coupled to said linear photosensor array, wherein said linear photosensor array is configured to receive the optical photons and to generate an electrical signal corresponding to the optical photons (col 8, lines 45-48).

Therefore, it would have been obvious to one skilled in the art at the time the invention was made to modify the invention of Dobbs et al. to use imager of Honda et al.

The motivation is to use an imager which is inexpensive, light weight and produce high quality images (col 2, lines 19-22) as well as improve durability (col 12, lines 24-27).

Regarding claim 41, the linear photosensor array and substrate are adjustable for arranging each of said photosensors at a predetermined angle relative to adjacent one of said photosensors (Fig 4 or 6).

Allowable Subject Matter

Claims 3, 4, 8-10, 13-15 and 18-23 are allowed.

Independent claim 8 is allowed for the reasons stated in a previous office action (Paper 110904).

Independent claim 15 is allowed for the reasons stated in a previous office action (dated May 13, 2005).

Claims 3, 4, 9, 10, 13 and 14; 18-23 depend on independent claims 8 and 15 respectively and therefore they are also allowed.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher M. Kalivoda whose telephone number is (571) 272-2476. The examiner can normally be reached on Monday - Friday (8:30 - 5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frank G. Font can be reached on (571) 272-2415. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for

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published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

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cmk

10/24/05



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